Letter from Alexander Graham Bell to Marian Bell Fairchild, July 25, 1906

Beinn Bhreagh. Victoria County, Cape Breton, N.S. July 25th, 1906. Mrs. David G. Fairchild, 1331 Connecticut Avenue, Washington, D. C. Dear Daidums:—

I was glad to receive a note from you last night containing newspaper clippings about Uncle Charlie's great work. I am glad to know a little about what he is doing. I was specially pleased to find that you want “A dictated letter from me” for you know it is very much more easy for me to dictate a letter than to write one with my own hand. Your mamma and others in the family do not like typewritten letters — with the result of getting no letters at all — or very few.

I have just seen a copy of the World's Work for July and have read David's article on the “New Hope of Farmers” with great interest and pleasure. It is a well written article both valuable and important. I hope David is careful to get reprints of all his articles for distribution to his friends. I think it is specially important that he should give copies of his writings to Secretary Wilson — and that Secretary Wilson should read them so that the Secretary should know that David is one of those who is making the work of the Agricultural Department known to the 2 world — and favorably known. Secretary Wilson appreciates publicity of the right kind and it cannot be bad for David for the Secretary to be favorably impressed by his public writings. I think the Secretary would be more inclined to read these reprints if they were sent to his private address instead of to the Department where of course he is deluged with printed matter. I wish we could have you both up here instead of stewing in Washington. Don't forget that I purchased one of Willis Moore's ice stoves specially for your benefit and I hope you will make use of it freely in the hot weather.

I think your mamma is improving here and I have invented some new forms of excercise for stirring the blood and promoting the circulation with which she seems much pleased. I have just returned from Sydney where I attended a banquet of the Electrical Society of the Maritime Provinces. My only objection to attending such banquets is that I am always called upon for a speech.

The Bras D'or Yacht Club have a race here to-morrow and Bert is praying for heavy winds in order to beat Mr. Carruth and I suppose Mr. Carruth is equally anxious for light winds for he can beat everybody in a drifting match. Gardiner hopes for good luck with his new boat which he purchased in Sydney a few days ago. He and his friend Millar seem to be quite delighted with the boat. I have not examined it yet having only seen it at a distance. Gardiner is rather disgusted I think with the fact that it has air-tight tanks at the bow and stern but I feel much relieved by 3 the knowledge that the boat will not sink if upset.

You would hardly recognize Bert and Elsie with their ruddy countenances after a weeks cruise together, and the children too are as brown as berries. Melville enjoys being out all day with bare feet and legs. Gertrude however finds the gravel a little hard for her bare tooties and has been provided with a pair of sandals. The baby is looking better than she has ever been before and is as good as gold. This undoubtedly is a splendid place for children. To-morrow is Gertrude's birthday, and your mamma is making a big rag doll to present to her on the occasion. I propose that she should ask Claude McDermid “The Doctor” to make the presentation for of course little people always learn that babies are brought to theri mothers by Doctors although I always understood im my early boyhood that I came from “The Queen's Cabbage Garden”.

We are to have a Harvest Home here on August 17th, with Douglas McCurdy in charge. He has prepared a notice which has been pasted up in the window of McKay's Store and in other places which is really worth reading. I shall ask Mr. Cox to enclose a copy of it.

We have now four young men staying with us Douglas McCurdy, Claude McDermid, Gardiner Bell, and his friend Millar. Mr. Cox is also here living in Baddeck and coming over every day — and there is not a girl for any one of them. So we are going to have a dance on Friday and we will try to have some of the young girls from Baddeck as well as the girls we know who are nearly all 4 married. Bessie MacRae is about the only one of your set still remaining in single blessedness excepting Miss Taylor — but I am afraid she doesn't count as she is no beauty. But to my taste Bessie is a beauty and no mistake, and why the young men have all let her alone I cannot imagine perhaps the fault is her own and she may be to particular.

Gardiner looks to me a very delicate fellow and has undoubtedly over grown his strength. I think he must be at least six feet two and his face has lines upon it that I do not like. It is drawn and had a haggard look about it when he came here. He seems to have much improved since his arrival and takes great pleasure in being out in the open air on the water. Boating and sailing I think are just the tings he needs to brace him up. He is also studying every day with Claude McDermid and the Doctor is such a conscientious fellow that I have no doubt that Gardiner is profiting by his studies with him.

Claude McDermid is carrying on some experiments for me in hatching eggs outside of their shells. We have a number of eggs in tumblers covered with a glass plate so that we can observe what changes take place from time to time. The tumblers have been put in an incubator and kept at a temperature of 101 degrees. They have all shown indications of development and some of them have reached the stage where blood is formed. The experiment is therefore promising. After being in the incubator for about a week most of the eggs begin to show a formation of mold upon the upper surface and 5 have now been thrown away and a new set started. On account of the way in which the eggs were broken into the tumblers the germinal speck was below the yoke. In the new set the eggs have been so broken as to leave the germinal speck floating about above and I hope for still greater development than in the case of the first set.

Claude McDermid has also taken hold of my apparatus for producing artificial respiration and he is going to have a baby box made with which he hopes to try experiments on newly born children in Washington. He has received an encouraging letter from Doctor Kober of Washington who promises him every assistance when he returns.

We have just killed one of our Ewes because she shows marked symptoms of a disease which killed many of John McKillop's sheep. Although the Ewe seemed to be in good physical condition we thought it best to kill her because we know from past experience that the disease will ultimately prove fatal and we wish to protect the rest of the flock from infection s . Unfortunately this Ewe is the mother of our 8 nippled lamb, and I hate to part with her for if kept through the winter she would probably live long enough to give us another lamb. I am determined however to stamp out this disease in the flock. The sheep have been doing well in Mr. Davidson's hands and it would be a great pity to allow the disease to appear again. Mr. McDermid has prepared some microscopic sections for examination by a Veterinary Surgeon and has sent them to Sydney for a report. On Monday we are to have a thorough examination of the whole flock to see whether any other sheep show symptoms of 6 this disease. If so we will kill them at once even though they should prove to be the best nippled sheep in the flock. I hope however to find the rest of the flock free from it.

You would hardly recognize the Laboratory as it exists to-day in the hands of Mr. Bedwin. He has at least a dozen persons employed all hard at work making cells and covering them with silk, making propellers two meters in diameter and completing the super-structure of the boat or float which is to be propelled on the Bras D'or Lakes by means of Aerial Propellers and steered by Aerial Rudders. We have a fine little gasoline motor here of about two and a half horse power with which to make these experiments, and I have given orders for another motor from ten to fifteen horse power which will weigh only about 100 pounds for use in the flying machine when it is constructed. We have not yet been able to begin experiments upon the water because of the non-arrival of the copper

floats which have been made for us in Boston. They may come however any day. In the meantime I have had several hundred cells covered with Japenese water-proof paper which David obtained for me from Japan. These will be placed upon floats that have been made here and be raised into the air by being towed. The Japanese paper has been attached to the wooden cells by means of rubber cement which seems better than glue because not acted upon by water. I gave Mr. Bedwin an order for 10,000 cells so that we might have plenty of material for our own experiments and cells left over for sale. About 7500 cells have already been made and we are pushing the completion of the rest while waiting for the floats from Boston.

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The cells are of new construction — machine made — with metallic corners — after McNeil's models. They seem to be a great success. Mr. McNeil is at work upon a folding kite but his apparatus has not yet reached the stage of trial.

We are not making many experiments in kite flying as I have past beyond the kite flying stage. The few experiments we have made have been with Oionos Kites loaded with heavy masses of lead at the head and having tails operated by the head load. Some points of importance have come out.

As a general rule these kites when freed in the air come down very slowly and steadily and are quite uninjured by the shock of alighting. Sometime ago Mr. McNeil happened to be quite near the Oionos Kite and noticed that after touching the ground it rebounded like a rubber ball in spite of the heavy load it carried. I am inclined to think that this result is due to the fact that the weight was free to swing so that when the kite struck the ground the weight swung forwards and upwards thus relieving the kite altogether of the load. The upward direction of the motion actually tending to lift the head from the ground while the sudden elevation of the tail due to the swinging forward of the load depressed the stern the whole operating to reduce the shock of alighting and leading actually to rebound.

This has led me to consider whether in an actual flying machine it might not be well to have the man on a swing in front of the machine. The swing controlling the tail automatically so that 8 it will rise when the machine tends to dive and be lowered when the head of the machine is lifted too high from the horizontal position. This would not prevent the man from operating the tail at will and the swing would be a great safe-guard to the man and to the machine in case of a dangerous landing.

You remember the recent accident in England to an express train in which a number of Americans were killed. One man hung on to a window strap when the car turned over and was thus suspended when the final shock came. He simply swung like a pengulum and escaped without injury whereas all the other occupants of the car were either killed or injured.

In a similar manner the man in front of the flying machine on a swing would be thrown forward and up in the case of a heavy landing. If he held on to his seat his upward motion against gravity would reduce his momentum; and even if he let go —

It is five o'clock and Mabel wants me to go out with her.

I have on my table a picture of a very pretty girl which reminds me of you for it is indeed intended for you — a miniature on ivory but I have nothing to remind me of David. Won't you send me his photograph to place beside your picture?

Your loving father, Alexander Graham Bell